General

Guideline Title

Falls and fall risk in the long-term care setting.

Bibliographic Source(s)

American Medical Directors Association (AMDA). Falls and fall risk in the long-term care setting. Columbia (MD): American Medical Directors Association (AMDA); 2011. 23 p. [45 references]

Guideline Status

This is the current release of the guideline.

This guideline updates a previous version: American Medical Directors Association (AMDA). Falls and fall risk. Columbia (MD): American Medical Directors Association (AMDA); 2003. 16 p.

Recommendations

Major Recommendations

Note from the American Medical Directors Association (AMDA) and the National Guideline Clearinghouse (NGC): The original full-text guideline provides an algorithm on "Falls and Fall Risk" to be used in conjunction with the written text. Refer to the "Guideline Availability" field for information on obtaining the algorithm, as well as the full text of the guideline, which provides additional details.

Recognition

Step 1

Does the patient have a history of falls?

A history of falls is a strong predictor of future falls. Review the patient's record for evidence of previous falls. Ask the patient and the patient's caregiver or family if the patient has a history of falling. A history of one or more recent falls, for any reason, within 6 months should be listed as a problem in the patient's record. The potential for further falling should be addressed in the patient's care plan, either separately or in conjunction with care plans related to other risk factors associated with increased fall risk.

Step 2

Is the patient at risk of falling?

Many risk factors are associated with falls (see Table 1 in the original guideline document). Multiple factors are often involved in a given patient.

Some classes of medications impair alertness and balance or cause orthostatic hypotension (see Table 2 in the original guideline document).

Document risk factors for falling in the patient's record and discuss the patient's fall risk in care conferences. Table 3 in the original guideline document lists items that may need to be reviewed when assessing a patient's fall risk, including the following risk categories:

- Fall history
- Medications
- Underlying conditions
- Functional status
- Neurological status
- Psychological factors
- Environmental factors

Assessment

Step 3

Has the patient just fallen?

Provide staff with a clear, written procedure that describes what to do when a patient falls. When a patient has just fallen or is found on the floor without a witness to the fall, a nurse should record vital signs and evaluate the patient for possible injuries to the head, neck, spine, and extremities. If there is evidence of a significant injury, such as a fracture or bleeding, provide appropriate first aid, notify the practitioner and family, and get emergency assistance if necessary.

Transfer of the patient to a hospital emergency room is appropriate if he or she exhibits the following injuries or signs after a fall:

- Uncontrolled bleeding
- Major fracture or fracture likely to require surgical intervention
- Deformity of limbs
- Acute change in neurological status or cognition (see Table 4 in the original guideline document)

Step 4

Evaluate the factors associated with the fall.

It is insufficient to say simply that a patient has a "fall risk" or a "problem with falling." After an observed or probable fall, or after a fall risk has been identified, a more detailed analysis of the patient's falling or fall risk should take place.

Identifying the Causes of a Fall

Identifying and correcting the causes of falls can often reduce the risk of falling. For patients who have recurrent falls, continue to collect and evaluate information until either (1) the cause of the falling is identified or (2) it is determined that the cause cannot be found or that finding a cause would not change the outcome or the patient's management. If possible, document how it was concluded that certain factors contributed to or caused falling whereas others were not relevant. No further evaluation may be necessary if the fall is clearly the result of an obvious extrinsic factor that can be corrected.

Performing a Post-Fall Evaluation

After a fall, obtain relevant history regarding the circumstances (see Table 5 in the original guideline document). The patient's current medications, especially any recent changes, should also be reviewed. A postural blood pressure and pulse should be obtained along with a gait and balance evaluation. (Box 1 in the original guideline describes the steps for assessing for orthostatic hypotension.)

Step 5

Identify the patient's actual and potential complications of falls.

Some falls may result in significant complications (see Table 7 in the original guideline document). It is important to define complications of falls and significant potential complications of falling for each patient. For example, different types of falls carry different risks of injury. Direction of falling affects risk—there is an increased risk of fracture if the resident falls sideways. Energy and speed of the fall also increase the risk of injury. Posterolateral falls carry the highest risk of hip injury.

Treatment

Step 6

Develop a plan for managing falls and fall risks.

Care goals should include prevention of falls when possible, a decrease in the number of falls, and a decrease in the risk and severity of injury. It is unrealistic to expect to eliminate all falls, but an appropriate goal for many patients may be to reduce the number of falls and the risk of injury. The management of falls and fall risk may involve one or several measures.

Step 7

Manage the cause(s) of falling.

Managing falls can be complicated because many falls result not from a single cause but from the interaction of several factors. Successful fall management uses a systematic approach that may require repeated reassessment and adjustment.

Cause-specific interventions are only sometimes available and effective. At other times, the best that can be done is to try various interventions until falling is reduced or stops or until an uncorrectable reason is identified for its continuation.

Refer to the original guideline document for suggested interventions for:

- Falls caused by disturbances of gait or balance
- Falls caused by orthostatic hypotension
- Falls associated with medications
- Falls associated with specific conditions (vitamin D deficiency, anemia, urinary incontinence, diabetes)

Step 8

Implement relevant general measures to address falling and fall risks.

Various generic approaches (i.e., those that are not directed at specific causes) can have an impact on the prevention and management of falls (see table below). Coordinate clinical initiatives to prevent and manage falls with initiatives of the interdisciplinary team (IDT) and facility safety committee, reviews of falls by the quality improvement committee, and efforts to ensure a safe environment for wanderers.

Table. Examples of Facility Approaches to Try to Reduce Falls or Consequences of Falls

- Activities program
- Function-focused care philosophies (e.g., restorative care, exercise programs)
- Patient education about safe sitting and standing
- Program to help patients and families cope with and adapt to nonmodifiable risk factors for falling
- Programs for patients who wander
- Reduction in the use of physical restraints
- Rehabilitation program (e.g., balance training, strengthening, gait training, assistive devices)
- Staff education about fall risks and potentially helpful interventions
- Toileting and continence programs or a timed voiding schedule
- Hip protectors

Monitoring

Step 9

Monitor falling in patients with a fall risk or fall history.

Monitor and document the patient's response to interventions intended to reduce falling or the risk of falling. It may be helpful for the pharmacy consultant to conduct a medication review after a fall to evaluate and rule out any medication risk factors. If interventions have been successful in preventing falling, continue with current approaches or reconsider whether those measures are still needed if the problem that required the intervention (e.g., dizziness, joint pain) has resolved or been corrected.

If the patient continues to fall, re-evaluate the situation and reconsider current interventions. Amend the care plan as necessary to reflect the addition of new interventions and the need for continued monitoring. Document the presence of irreversible risk factors. Also, consider relevant interventions to try to minimize fall-related injuries (e.g., using hip protectors, treating osteoporosis).

If falls continue despite initial interventions, the reason could be that different or additional causes exist, the underlying causes are not readily correctable, the cause cannot be identified, or the interventions are insufficient. Consider other possible reasons for the patient's falling besides those that have already been identified, or document why a further search for causes is unlikely to be helpful.

Step 10

Establish quality improvement activities related to fall risk and falling.

Include analysis of falls in the facility's quality improvement studies. Track accidents and falls by (at a minimum) time, location, and identified categories of causes. The total number of falls will fluctuate from month to month.

Evaluate the process associated with fall prevention or interventions that are implemented; interventions need to be implemented as intended in order for them to be optimally effective. Indicators that fall prevention processes and interventions are being implemented might include evidence that post-fall assessment of patients is completed and identified causes have been addressed (e.g., removal or replacement of unsafe assistive devices, discontinuation of medications that cause orthostatic hypotension) and that patients are participating in a muscle-strengthening exercise class. Relate these data to care processes to ensure that everything reasonable is being done to identify risk factors for falling and take appropriate preventive measures (see "Performance Measures" in the original guideline document). Table 10 in the original guideline document lists additional sample performance measurement indicators.

The medical director can play a pivotal role in fall prevention and management, including:

- Setting the expectation of all facility staff that fall risk assessment and fall prevention are facility priorities as they relate to both patient safety and facility liability
- Helping to develop and use appropriate policies and procedures on falls and fall risk
- Providing education and information about potential medical causes of falling
- Ensuring appropriate and timely practitioner assessment and intervention when medications or medical conditions may be causing or contributing to falls when falls occur

Clinical Algorithm(s)

An algorithm is provided in the original guideline document for recognition, assessment, treatment, and monitoring of falls and fall risk in the long-term care setting.

Scope

Disease/Condition(s)

- Falls
- Fall-related injuries
- Physical, functional, and environmental conditions that predispose patients to falls

Guideline Category

Evaluation

Management

Prevention

Risk Assessment

Clinical Specialty

Family Practice

Geriatrics

Internal Medicine

Physical Medicine and Rehabilitation

Intended Users

Advanced Practice Nurses

Allied Health Personnel

Dietitians

Health Care Providers

Nurses

Occupational Therapists

Pharmacists

Physical Therapists

Physician Assistants

Physicians

Social Workers

Speech-Language Pathologists

Guideline Objective(s)

- To improve the quality of care delivered to patients in long-term care facilities who have a recent history of falls or who are at risk of falling
- To guide care decisions and to define roles and responsibilities of appropriate care staff

Target Population

Elderly residents of long-term care facilities

Interventions and Practices Considered

Evaluation/Risk Assessment

1. Evaluation of history of falls
2. Assessment of risk of falls and post-fall evaluation (fall history, medications, underlying conditions, functional status, neurological status, psychological factors, environmental factors)
3. Identification of nature, frequency, and causes of individual's falls
4. Identification of actual and potential complications of falls

Management/Prevention

1. Development of a plan for managing falls and fall risks

2. Management of the causes of falling (e.g., implementing restorative or rehabilitative care to improve strength, balance, gait, and transferring ability; educating regarding managing orthostatic hypotension; evaluating and managing medication use)
3. Implementation of relevant general measures to address falling and fall risks (e.g., facility approaches, exercise and balance training, use of physical restraints, use of alarms, environmental modifications)
4. Monitoring of falling in individuals with fall risk or fall history
5. Conducting quality improvement activities related to falls

Major Outcomes Considered

- Risk, frequency, and incidence of falls and fall-related injuries
- Morbidity and mortality related to falls
- Other measures, such as patient and family satisfaction, use of physical restraints, and quality of life

Methodology

Methods Used to Collect/Select the Evidence

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

Medline, PubMed, and geriatric-specific journals such as the Journal of the American Medical Directors Association (JAMDA), Annals of Long Term Care, and Journal of the American Geriatrics Society (JAGS) were searched from May 2009 through February 2011. Studies were included if they met the following criteria:

- Studies that are valid, consistent, applicable and clinically relevant
- Studies where the recommendation is supported by fair evidence (based on studies that are valid, but there are some concerns about the volume, consistency, applicability and clinical relevance of the evidence that may cause some uncertainty but are not likely to be overturned by other evidence)

Searches were specific to the guideline topic under consideration.

Number of Source Documents

Not stated

Methods Used to Assess the Quality and Strength of the Evidence

Expert Consensus

Rating Scheme for the Strength of the Evidence

Not applicable

Methods Used to Analyze the Evidence

Review

Description of the Methods Used to Analyze the Evidence

Not stated

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

Original guidelines are developed by interdisciplinary workgroups, using a process that combines evidence and consensus-based approaches. Workgroups include practitioners and others involved in patient care in long-term care facilities. Beginning with pertinent literature searches for articles and information related to the guideline subject, and a draft outline/framework, each group works to make a concise, usable guideline that is tailored to the long-term care setting. Because scientific research in the long-term care population is limited, many recommendations are applied research of older adults and geriatric medicine. Some recommendations are based on the expert consensus opinion of practitioners and geriatric experts in the field.

Guideline revisions are recommended under the direction of the Clinical Practice Guideline (CPG) Steering Committee. The Steering Committee reviews any American Medical Directors Association (AMDA) guidelines that are three years old prior to an annual Steering Committee meeting to determine if the CPG is current. A thorough literature review is done for each CPG as well to ascertain if the data within is still current.) The AMDA Clinical Practice Committee Chair selects the guidelines to be revised/created based on 1) the Steering Committee recommendations, 2) data collected, and 3) an assessment of the difficulty of development and relevance to the AMDA membership. The Board of Directors has final approval. The guideline revision process is similar to the original guideline process, except the workgroup starts with the original guideline (or last revision) as a basis to begin with.

Rating Scheme for the Strength of the Recommendations

Not applicable

Cost Analysis

A formal cost analysis was not performed and published cost analyses were not reviewed.

Method of Guideline Validation

External Peer Review

Internal Peer Review

Description of Method of Guideline Validation

All American Medical Directors Association (AMDA) clinical practice guidelines undergo external review. The draft guideline is sent to approximately 175+ reviewers. These reviewers include AMDA physician members and independent physicians, specialists, and organizations that are knowledgeable of the guideline topic and the long-term care setting.

AMDA's guidelines are supported by the following associations/organizations, who are members of its Clinical Practice Guideline Steering Committee. These associations/organizations all have representatives who participate in the external review phase and officially sign off on the guideline before publication: American Association of Homes and Services for the Aging (Now LeadingAge); American College of Health Care Administrators; American Geriatrics Society; American Health Care Association; American Society of Consultant Pharmacists; Gerontological Advanced Practice Nurses Association; Direct Care Alliance; National Association of Directors of Nursing Administration in Long-Term Care; National Association of Health Care Assistants.

Evidence Supporting the Recommendations

Type of Evidence Supporting the Recommendations

The type of evidence supporting the recommendations is not specifically stated.

The guideline was developed by an interdisciplinary workgroup, using a process that combined evidence- and consensus-based approaches. Because scientific research in the long-term care population is limited, many recommendations are applied research of older adults and geriatric medicine. Some recommendations are based on the expert consensus opinion of practitioners and geriatric experts in the field.

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

- Guideline implementation is intended to minimize fall risk and risk of fall-related injuries while maximizing individual dignity, freedom, and quality of life.
- Although no specific efforts or combinations of interventions have been shown to prevent all falls or injuries associated with falling, it is often possible to reduce the frequency of falls and the severity of injuries associated with falling.

Potential Harms

Risks Associated with Restraint Use*

- Asphyxiation
- Behavioral issues and distress
- Bone loss and increased risk of fracture
- Contractures
- Decreased cognitive performance
- Dependence in walking
- Depression and social isolation
- Pressure ulcers
- Infection
- Muscle wasting and weakness
- Strangulation
- Urinary and fecal incontinence

*Note: The indiscriminate use of physical restraints is no longer an accepted standard of care in long-term care facilities.

Qualifying Statements

Qualifying Statements

- This clinical practice guideline is provided for discussion and educational purposes only and should not be used or in any way relied upon without consultation with and supervision of a qualified physician based on the case history and medical condition of a particular patient. The American Medical Directors Association (AMDA), its heirs, executors, administrators, successors, and assigns hereby disclaim any and all liability for damages of whatever kind resulting from the use, negligent or otherwise, of this clinical practice guideline.
- The utilization of AMDA's Clinical Practice Guideline does not preclude compliance with State and Federal regulation as well as facility policies and procedures. They are not substitutes for the experience and judgment of clinicians and caregivers. The Clinical Practice Guidelines are not to be considered as standards of care but are developed to enhance the clinician's ability to practice.
- Long-term care facilities care for a variety of individuals, including younger patients with chronic diseases and disabilities, short-stay patients

needing postacute care, and very old and frail individuals suffering from multiple comorbidities. When a workup or treatment is suggested, it is crucial to consider if such a step is appropriate for a specific individual. A workup may not be indicated if the patient has a terminal or end-stage condition, if it would not change the management course, if the burden of the workup is greater than the potential benefit, or if the patient or his or her proxy would refuse treatment. It is important to carefully document in the patient's medical record the reasons for decisions not to treat or perform a workup or for choosing one treatment approach over another.

Implementation of the Guideline

Description of Implementation Strategy

The implementation of this clinical practice guideline (CPG) is outlined in four phases. Each phase presents a series of steps, which should be carried out in the process of implementing the practices presented in this guideline. Each phase is summarized below.

I. Recognition
   - Define the area of improvement and determine if there is a CPG available for the defined area. Then evaluate the pertinence and feasibility of implementing the CPG.

II. Assessment
   - Define the functions necessary for implementation and then educate and train staff. Assess and document performance and outcome indicators and then develop a system to measure outcomes.

III. Implementation
   - Identify and document how each step of the CPG will be carried out and develop an implementation timetable.
   - Identify individual responsible for each step of the CPG.
   - Identify support systems that impact the direct care.
   - Educate and train appropriate individuals in specific CPG implementation and then implement the CPG.

IV. Monitoring
   - Evaluate performance based on relevant indicators and identify areas for improvement.
   - Evaluate the predefined performance measures and obtain and provide feedback.

Performance Measures

- Is a fall risk assessment completed and documented for each newly admitted patient? Are the results of this assessment communicated to the patient and his or her family or advocate?
- Do practitioners address medical or medication risk factors in patients who are identified as having such risk factors?
- Do facility staff and management review the factors (e.g., environment, staff assignments, time of day) associated with falls?
- To identify potentially correctable conditions, does a practitioner review the case of any patient who falls more than once, or who has a fall with a significant injury, to identify potentially correctable conditions?

Table 10 in the original guideline document lists additional sample performance measurement indicators.

Implementation Tools

Audit Criteria/Indicators

Clinical Algorithm

Patient Resources

Tool Kits

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Getting Better

Living with Illness

Staying Healthy

IOM Domain

Effectiveness

Patient-centeredness

Safety

Identifying Information and Availability

Bibliographic Source(s)

American Medical Directors Association (AMDA). Falls and fall risk in the long-term care setting. Columbia (MD): American Medical Directors Association (AMDA); 2011. 23 p. [45 references]

Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

2003 (revised 2011)

Guideline Developer(s)

American Medical Directors Association - Professional Association

Guideline Developer Comment

Organizational participants included:

- American Association of Homes and Services for the Aging
- American College of Health Care Administrators
- American Geriatrics Society
- American Health Care Association
- American Society of Consultant Pharmacists
- Direct Care Alliance
- Gerontological Advanced Practice Nurses Association
- National Association of Directors of Nursing Administration in Long-Term Care
- The American Medical Directors Association (AMDA) Foundation

Source(s) of Funding

American Medical Directors Association

Guideline Committee

Clinical Practice Guideline Steering Committee

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Financial Disclosures/Conflicts of Interest

All contributors must submit an Accreditation Council for Continuing Medical Education (ACCME) approved disclosure form prior to being accepted as a volunteer member of the guideline workgroup. This disclosure form is reviewed by the chair of the American Medical Directors Association (AMDA) Clinical Practice Committee. If any conflicts are perceived, that person is not accepted to be part of the workgroup.

Guideline Status

This is the current release of the guideline.

This guideline updates a previous version: American Medical Directors Association (AMDA). Falls and fall risk. Columbia (MD): American Medical Directors Association (AMDA); 2003. 16 p.

Guideline Availability

Electronic copies: None available

Print copies: Available from the American Medical Directors Association, 10480 Little Patuxent Pkwy, Suite 760, Columbia, MD 21044. Telephone: (800) 876-2632 or (410) 740-9743; Fax (410) 740-4572. Web site: www.amda.com.

Availability of Companion Documents

The following is available:

- Osteoporosis/falls tool kit. Available to order from the American Medical Directors Association (AMDA) Web site.

In addition, Table 10 in the original guideline document provides examples of process and outcome indicators related to falls.

Patient Resources

The following are available:

- Falls/falls risk. Audio. Available from the American Medical Directors (AMDA) Web site.
- The facts about falls. 2009 Nov. 1 p. Available in Portable Document Format (PDF) from the AMDA Web site.

Please note: This patient information is intended to provide health professionals with information to share with their patients to help them better understand their health and their diagnosed disorders. By providing access to this patient information, it is not the intention of NGC to provide specific medical advice for particular patients. Rather we urge patients and their representatives to review this material and then to consult with a licensed health professional for evaluation of treatment options suitable for them as well as for diagnosis and answers to their personal medical questions. This patient information has been derived and prepared from a guideline for health care professionals included on NGC by the authors or publishers of that original guideline. The patient information is not reviewed by NGC to establish whether or not it accurately reflects the original guideline's content.

NGC Status

This NGC summary was completed by ECRI on July 6, 2004. The information was verified by the guideline developer on August 4, 2004. This NGC summary was updated up ECRI Institute on October 31, 2011. The updated information was verified by the guideline developer on November 29, 2011.

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